



WHAT IS INTELLECTUAL PROPERTY?

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Countries with innovative local industries almost invariably have laws to foster innovation by regulating the copying of inventions, identifying symbols, and creative expressions. These laws encompass four separate and distinct types of intangible property — namely, patents, trademarks, copyrights, and trade secrets, which collectively are referred to as “intellectual property.”

Intellectual property shares many of the characteristics associated with real and personal property. For example, intellectual property is an asset, and as such it can be bought, sold, licensed, exchanged, or gratuitously given away like any other form of property. Further, the intellectual property owner has the right to prevent the unauthorized use or sale of the property. The most noticeable difference between intellectual property and other forms of property, however, is that intellectual property is intangible, that is, it cannot be defined or identified by its own physical parameters. It must be expressed in some discernible way to be protectable.

All four types of intellectual property are protected on a national basis. Thus, the scope of protection and the requirements for obtaining protection will vary from country to country. There are, however, similarities between national legal arrangements. Moreover, the current worldwide trend is toward harmonizing the national laws.

Patents: Society's Contract With Inventors

One might say that a patent is a contract between society as a whole and an individual inventor. Under the terms of this social contract, the inventor is given the exclusive right to prevent others from making, using, and selling a patented invention for a fixed period of time in return for the inventor's disclosing the details of the invention to the public. Thus, patent systems encourage the disclosure of information to the public by rewarding an inventor for his or her endeavors.

Although the word “patent” finds its origins from documents issued by the sovereign of England in the Middle Ages for granting a privilege, today the word is linked synonymously with this exclusive right granted to inventors. The World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) provides the international standard for duration of patent exclusivity, which is 20 years from the date of filing. After the January 1, 2000, implementation date, all WTO members will be obligated to meet this standard. Under all patent systems, once this period has expired, people are free to use the invention as they wish. The benefits of an effective patent system can be partially illustrated as follows:

A patent rewards the investment of time, money, and effort associated with research. It stimulates further research as competitors invent alternatives to patented inventions, and it encourages innovation and investment in patented inventions by permitting companies to recover their research and development costs during the period of exclusive rights.

The limited term of a patent also furthers the public interest by encouraging quick commercialization of inventions, thereby making them available to the public sooner rather than later. Patents also allow for more latitude in the exchange of information between research groups, help avoid duplicative research, and, most importantly, increase the general pool of public knowledge.

Although the right conferred by a patent is a right to exclude others from making, using, or selling a patented invention during the term of the patent, it is important to understand that a patent does not necessarily give the patent owner the right to make, use, or sell the invention himself or herself. For example, the owner of a patent for an improved method of producing a chemical compound would not be free to sell the compound made using the patented

method if the compound is itself patented by someone else.

Although all WTO members are subject to patent provisions in the TRIPS Agreement, patents are granted under national laws and, therefore, the rights are also national in scope. Thus, a U.S. patent can be asserted only against infringing conduct in the United States. In most countries these rights are enforceable by civil rather than criminal proceedings.

Accordingly, enforcement falls solely to the patent owner. In general, any act of making, using, or selling the patented invention without permission infringes that patent, whether it be by the state, a corporation, or an individual. Any such infringing act will give rise to liability, regardless of the infringer's intent or lack of knowledge of the patent. Remedies for patent infringement can include injunctions, orders to deliver up or destroy infringing articles, and compensation for damages suffered by the patentee or profits made by the infringer.

An issued patent remains open to attack for invalidity, and it is a common defense for an alleged infringer to assert that the patent is invalid. Typically, patents are challenged on the ground that the claimed invention was invented by someone other than the named inventor or that the invention would have been obvious to persons skilled in the relevant technology.

What Can Be Patented?

Article 27 of the TRIPS Agreement provides that WTO member states shall provide patents for any invention, either a product or a process for creating a product, "provided that they are new, involve an inventive step, and are capable of industrial application." In other words, to be patentable, an invention must be novel, useful, and nonobvious. A prerequisite to patentability is that the invention must be capable of some practical application. This emphasizes the importance the patent system puts on usefulness. Although this principle remains constant, the phraseology used within the legislation of particular countries varies; for example, in the United States, patentable subject matter must be "useful," whereas in the United Kingdom it must be capable of "industrial application."

The invention must be new — that is, the subject matter of the invention is not or cannot be inferred to be part of what is already known. This is commonly referred to as the "novelty" requirement. New or novel in this context means "new to the public." Therefore, something that has previously been used or known but has not been made available to the public (for instance, if it has been kept a secret) is not a bar to patentability.

The invention must also be nonobvious. This prevents someone from taking advantage of the patent system and obtaining protection for something that is a mere extension or trivial variation of what is known. Generally the test for inventiveness, or "nonobviousness," is based on what a reasonable person skilled in the field to which the invention pertains, at the time the invention was made, would consider to be nonobvious.

The TRIPS Agreement provides a transitional period for developing economies that do not currently provide product patent protection in the areas of agro-chemicals or pharmaceuticals. In fact, most already do because of the development benefits to the biotechnology sector from full patent protection. Process patent protection does not encourage investment because of the difficulty of enforcing a process patent. It is particularly difficult to enforce a process patent because the burden of proof to show that the patent has been infringed is on the patent owner. The patent owner must prove that a particular manufacturing process (that is, the process covered by the patent) was used to manufacture the particular chemical. This can be very difficult to show where there are many possible process variants and where access to the potential infringer's facility is not available. In practice, this is done by looking for trace impurities that are characteristic of the manufacturing process. One can imagine how complex the issues can become if, for instance, a patent protects a pharmaceutical that is made in a country where there is no protection for pharmaceuticals and then is exported to a second country that provides protection only for manufacturing processes.

Over the past 15 years or so, many countries have changed from "process" to "product" patenting, and we expect all WTO members to upgrade their patent laws within the next few years because, under the WTO TRIPS Agreement, member states must provide full product patent protection no later than January 1, 2005.

Not only are the utilitarian aspects of new and useful inventions patentable, but many countries extend patent protection to novel, ornamental industrial designs. In the United States, this form of protection is known as a design

patent, while in many European countries, the property right in an industrial design is referred to as a design model.

In addition to such usual subjects of patent protection as devices, chemical compositions, and processes, some countries provide patent protection for living matter. For example, asexually reproduced varieties of plants, excluding bacteria, uncultured plants, and tuber propagated plants, can be protected, as can sexually reproduced plants (by seed), excluding bacterial, fungi, and first-generation hybrids. The TRIPS Agreement does not require protection for new living matter or plant varieties, but WTO members may join the International Union for the Protection of New Varieties of Plants, or UPOV.

Trademarks and Service Marks: Identifying the Source

Trademarks and service marks are primarily intended to indicate the source of goods and services and to distinguish the trademarked goods and services from others. They also symbolize the quality of the goods or services with which they are used. Most trademarks and service marks (called “marks”) are words, but they can be almost anything that distinguishes one product or service from another, such as symbols, logos, sounds, designs, or even distinctive nonfunctional product configurations.

The TRIPS Agreement extends the same level of recognition and protection for service marks as for trademarks (TRIPS Agreement Articles 15, 16). In some countries, registration of a mark may not be required to protect the mark, but in any case WTO members are obligated to provide protection for well-known trade or service marks. Because determinations of whether a mark is well known in the relevant sector of the public are made on a case-by-case basis, firms may find it desirable to register well-known marks. For marks that are not well known, countries may require the owner of the mark to register the mark with the national trademark office before protection in that country is granted.

The duration of protection afforded a mark varies greatly from country to country. Registrations are issued for finite periods of time. However, because of the fundamental purposes of marks namely, avoiding public confusion, encouraging competition, and protecting the owners' goodwill registrations may be renewed and thus extend indefinitely as long as the marks are used.

The owner of a mark may preclude others from using a similar mark if such use is likely to cause confusion in the minds of purchasers. Determining whether two marks are so similar as to be confusing usually involves a multi-factor analysis that compares the parties marks, their goods or services, their advertising and trade channels, the defendant's intent in choosing its mark, and the presence or absence of actual confusion.

A Spectrum of Protection for Trademarks and Service Marks

As in other intellectual property areas, trademark and service mark legislation is national in origin but must comply with provisions of the TRIPS Agreement. Some countries grant rights to the first person to use the mark in the course of business, while other countries grant rights to the first person to obtain a registration in that country.

In “first-to-use” countries, rights may subsist without registering the mark with the national trademark office. However, registration is still desirable because it is presumptive evidence of the validity of the mark and the owner's right to use that mark. It also appears on the national register of marks, providing notice to the world of the owner's use and claim of ownership. Under TRIPS, actual use of a trademark shall not be a condition for filing an application for registration of a trademark or service mark. Following the use or registration of a trademark, the owner must use the mark or it may become subject to attack by others on the grounds that the owner has abandoned it.

At a minimum, most countries require that a mark be distinctive; that is, it should be capable of distinguishing the goods or services of the owner of the mark from the goods or services of others. A mark may include any original combination of numbers, letters or other symbols, colors, or musical tones. To determine whether a mark meets this test, one must determine the strength of the mark.

A mark's strength is usually measured across a spectrum. This spectrum includes, from weakest to strongest, terms that are generic, descriptive, suggestive, arbitrary, and fanciful. At the weakest end of the spectrum are words, symbols, or devices that are not capable of distinguishing goods because they are common terms used to identify the goods themselves, such as book, table, or chair. Such terms are called generic terms and are not protectable as trademarks.

The next category comprises descriptive terms. A mark is descriptive if it describes the intended purpose, function, physical characteristic, laudatory quality, or end use of the product. Examples of descriptive marks include DAYBRITE for lighting fixtures, MICRO for wheel weights that are very small, and SUPREME for wine allegedly of superior quality. Because they are not inherently distinctive, a descriptive term cannot be protectable as a mark until, through extensive sales and advertising, the term has come to identify the source of the goods bearing the mark. In the United States, when a descriptive mark achieves this level of distinctiveness, it is said to have acquired a “secondary meaning.”

In contrast to descriptive marks, suggestive marks do not immediately describe the goods for which the mark is used; they rather require thought, imagination, or perception to reach a conclusion about the nature of the goods. Suggestive marks are considered inherently distinctive and protectable without first acquiring secondary meaning. Examples of suggestive marks may include HERO for fire extinguishers or STRONGHOLD for nails. Arbitrary marks are words, symbols, and devices that are in common use but, when used on the goods of the trademark owner, neither describe nor suggest the quality of those goods. Examples of arbitrary marks include APPLE for computers and DOVE for soap.

Like suggestive marks, arbitrary marks are inherently distinctive, and secondary meaning need not be proved. The most distinctive marks are fanciful marks. A fanciful mark is a coined word or symbol invented or selected solely to function as a mark. Examples of fanciful marks include EXXON for gasoline, KODAK for photographic supplies, XEROX for photocopying equipment, and PEPSI for soft drinks. Fanciful marks are traditionally afforded the greatest scope of protection.

Copyright: An Author's Expression

A copyright is an exclusive right to reproduce an original work of authorship fixed in any tangible medium of expression, to prepare derivative works based upon the original work, and to perform or display the work in the case of musical, dramatic, choreographic, and sculptural works. Copyright protection does not extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, or embodied. Rather, copyright protection is limited to an author's particular expression of an idea, process, concept, and the like in a tangible medium.

Copyright protection automatically subsists in all works of authorship from the moment of creation. The TRIPS Agreement provides a minimum standard for duration of copyright protection. In the case of a person, the term is the life of the author plus 50 years. In the case of a corporate entity, it is 50 years from the end of the calendar year of authorized publication or, in the absence of publication, from the end of the calendar year of making (TRIPS Article 12). The term of protection for live performances that are recorded is 50 years for the performer and producer, and 20 years for the broadcaster of the work. The United States recently upgraded its protection for copyrighted works as part of the Digital Millennium Copyright Act, or DMCA. For instance, in the United States, the copyright for the work of an individual author created on or after January 1, 1978, lasts for his or her lifetime plus 70 years after the author's death. However, if the work is made for hire, the copyright lasts for 120 years from the time of creation or 95 years from first publication, whichever is shorter.

The exclusive rights granted to the copyright owner do not include the right to prevent others from making fair use of the owner's work. Such fair use may include use of the work for purposes of criticism, comment, news reporting, teaching or education, and scholarship or research. The nature of the work, the extent of the work copied, and the impact of copying on the work's commercial value are all considered in determining whether an unauthorized use is a “fair use.”

Originality As the Key to Copyright

To secure copyright protection, the work in question must be an original work of authorship fixed in a tangible medium of expression. Works of authorship that fall within this definition may include:

- Literary works (including computer programs);
- Musical works and accompanying lyrics;
- Dramatic works and dialogue;
- Pantomimes and choreographic works;
- Pictorial, graphic, and sculptural works;

Motion pictures and other audiovisual works; and
Sound recordings.

It is important to note that the laws of many countries do not limit the type or form of work because authors are continuing to invent new ways of expressing themselves.

The test for the originality of a work is usually two- pronged. First, the work of authorship must originate from the author, in the sense that it must have actually been independently created by the author and not copied from other works. Second, the work must contain a sufficient amount of creativity so as to be more than trivial.

To be copyrightable, a work must be “fixed in a tangible medium of expression.” A work is fixed when its embodiment in a tangible medium is sufficiently permanent or stable as to permit it to be perceived, reproduced, or otherwise communicated for a period of time that is not transitory. The means, manner, or medium of fixation is irrelevant.

Copyright registration in most countries is relatively straightforward and inexpensive. Although copyright protection subsists from the moment the work is fixed in a tangible expression, copyright registration confers additional important benefits in some countries. Although some WTO members, including the United States, retain a registration system for copyrighted works, the TRIPS Agreement precludes use of formalities such as a registration system as a prerequisite for foreign nationals before initiating legal action to stop copyright infringement or to recoup costs, including attorneys' fees, of enforcement. So, for example, the United States may require that U.S. citizens, but not foreign authors, register works with the U.S. Copyright Office. In addition, in some countries, a copyright registration constitutes prima facie evidence of the validity and ownership of the copyright.

Trade Secrets: The Competitive Edge

A trade secret is information that is secret or not generally known in the relevant industry and that gives its owner an advantage over competitors. Trade secret protection exists as long as the information is kept secret or confidential by its owner and is not lawfully and independently obtained by others. Examples of trade secrets include formulas, patterns, methods, programs, techniques, processes, or compilations of information that provide one's business with a competitive advantage. The owner of a trade secret may recover damages resulting from the improper disclosure or use of its trade secret by another.

Determining When a Trade Secret Is Secret

Trade secrets are not registered like other forms of intellectual property and are not creatures of statutes. Instead, the judicial system of each country determines the requirements for obtaining trade secret protection. Protection for trade secrets is found in the TRIPS Agreement under the heading “Protection of Undisclosed Information” (TRIPS Article 39). Protection of undisclosed test data for marketing approval of pharmaceutical products is particularly sensitive and is required in TRIPS Article 39(3). Some of the factors commonly considered include:

- The extent to which the information is known outside of the business;
- The extent to which the information is known by employees and others involved in the trade secret owner's business;
- The extent of the measures taken to guard the trade secret;
- The value of the information to the owner and his competitors;
- The amount of money or effort expended by the trade secret owner in developing the secret; and
- The effort required by others to acquire or duplicate (through reverse engineering) the information.

The secrecy of an alleged trade secret is the most important factor to be considered. If the information claimed to be a trade secret is available through any legitimate means and is obtained in this way, then the information is no longer secret and may become ineligible for protection. However, if the owner has taken reasonable steps to protect the information, but the trade secret information nonetheless is publicly disclosed, the courts in many countries may still grant protection. Such reasonable steps may include requiring those persons who encounter the information as the result of normal business ventures to sign confidentiality and nondisclosure agreements.

Costs vs. Benefits

As with all business-related activities, economics plays a large role in determining whether to protect intellectual property. Companies must weigh the potential value of an intellectual property right against both the probability of realizing that value and the costs of securing, enforcing, and maintaining that right.

There are no hard and fast rules that determine the potential value of a given intellectual property right. What is valuable to one individual or company may be worthless to another. There are certain obvious factors that contribute to the potential value of the intellectual property, including the potential value of exclusive or other rights, assignments, or licenses, cross-licenses, enforcement against infringers, and as collateral for securing financing.

A trademark or service mark may be a very valuable asset. For example, it is widely believed the German automobile manufacturer BMW purchased the British automobile manufacturer Rover primarily to obtain its portfolio of desirable trademarks including “Land Rover,” “Range Rover,” “Triumph,” “Austin,” and “MGB.” On the other hand, a trademark may be virtually worthless if consumers associate it with poor quality.

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